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EXAMINER

SINES, BRIAN J

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/031,868
Filing Date: July 02, 2002
Appellant(s): WOHLSTADTER ET AL.

**MAILED
SEP 06 2007
GROUP 1700**

H.S. Weimar
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/2/2007 appealing from the final Office action mailed 11/24/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,200,531	Liljestrand et al.	3-2001
5,466,416	Ghaed et al.	11-1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 66 – 94 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 4 of Liljestrand et al. (U.S. Patent No. 6,200,531 B1) (hereinafter “Liljestrand”) in view of Ghaed et al. (U.S. Pat. No. 5,466,416 A) (hereinafter “Ghaed”).

Regarding claims 66, 72, 87 and 89 of the instant application, with respect to claim 1 of Liljestrand, Liljestrand recites an apparatus for conducting electrochemiluminescence (ECL) measurements, wherein the apparatus is comprising:

a cell having at least one cell wall which includes a transparent portion adjacent to an ECL chamber defined within said cell;

a working electrode abutting said ECL chamber and in optical registration with said transparent portion;

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a counter electrode abutting said ECL chamber; and
an electrically-shielded window adjacent to and in optical registration with said transparent portion.

Liljestrand does not specifically teach a heater that is thermally coupled or in thermal contact with the working electrode for adjusting the operating temperature of the working electrode. Liljestrand does not specifically teach a heater that is thermally coupled or in thermal contact with at least one surface of the chamber for adjusting the operating temperature of the chamber, and thereby the operating temperature of the working electrode. Ghaed does teach that the electrochemiluminescence process is substantially sensitive to the temperature of the sample under test (see col. 6, lines 38 – 49). Ghaed does teach the use of a fluid handling system that has a fluid heater system (see col. 6, lines 49 – 61). In addition, Liljestrand does teach that the electrochemiluminescence process occurs at the working electrode 140 site when testing assay samples (see, e.g., 14, lines 41 – 64). Hence, a person of ordinary skill in the art would have recognized the suitability of using a heating device to control the temperature of the working electrode test site in the disclosed device (see MPEP § 2144.07). Furthermore, a person of ordinary skill in the art would accordingly have had a reasonable expectation for success in incorporating the use of a heating element for effectively inducing and controlling the electrochemiluminescence test process at a working electrode test site in the disclosed apparatus (see MPEP § 2143.02). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a heater associated with either the working electrode or surface of the chamber proximal to the working electrode as claimed to facilitate effecting heating and temperature control for the disclosed device.

Regarding claims 67, 75, 76, 78 and 85, Liljestrand teaches that the heater is coupled to a temperature controller and sensor (see col. 17, line 60 – col. 18, line 5). Closed loop control methodologies are very well known in the art (see MPEP § 2144.03). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate an associated temperature sensor as claimed to facilitate effective temperature control for the disclosed device. In addition, the various recited temperature sensors are very well known in the art. Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of these sensors with the disclosed device for facilitating effective temperature control.

Claims 68 – 70 and 79 – 84 are considered statements of intended use. These additional claims recite no further structural limitations for the claimed apparatus. The prior art teaches all of the positively recited structure of the claimed device. The apparatus claims merely state how the recited features are intended to operate. The prior art device is considered capable of operating in the intended manner. If the prior art structure is capable of performing the intended use, then it meets the claim. Apparatus claims must be structurally distinguishable from the prior art in terms of structure, not function. The manner of operating an apparatus does not differentiate an apparatus claim from the prior art, if the prior art apparatus teaches all of the structural limitations of the claim (see MPEP § 2114).

Regarding claim 71, Liljestrand teaches that heater 216, is thermally coupled to an input fluid in the chamber of the device for temperature control (see col. 17, line 60 – col. 18, line 5).

Regarding claims 73, 74 and 85, Ghaed teaches the use of Peltier devices and resistive foil heaters for providing temperature control (see col. 16, lines 17 – 30). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of these heating

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elements with the disclosed device for facilitating effective temperature control. In addition, resistive thin film or foil heating elements are well known in the art to have a thickness of 1 inch or less.

Regarding claim 77, Liljestrand teaches that the sensors may be incorporated with, or an integral part, of the heater (see col. 18, lines 1 – 3). The use of a one-piece, integrated construction instead of the structure disclosed or taught in the prior art would have been within the ambit of a person of ordinary skill in the art (see MPEP § 2144.04). Therefore, it would have been obvious to a person of ordinary skill in the art to provide a temperature sensor that is an integral component of the heater.

Regarding claims 86 and 90, Liljestrand teaches the incorporation of a photodetector, such as a photodiode (see, e.g., col. 5, lines 32 – 35; col. 6, lines 53 – 65). Claims 2 – 4 of Liljestrand recites the further incorporation of a photodetector with the apparatus. Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a photodetector with the disclosed apparatus as claimed for facilitating effective ECL measurement detection.

Regarding claim 88, Liljestrand teaches the incorporation of a magnetic field generating device (e.g., magnet 146) (see figure 3B; col. 13, lines 46 – 67).

Regarding claim 89, Liljestrand teaches the incorporation of an electrically-shielded window (see, e.g., col. 5, lines 49 – 57).

Regarding claims 91 – 93, Liljestrand teaches the incorporation of a light source that is also capable of avoiding the detection of infrared radiation (see, e.g., col. 8, lines 22 – 34; col. 10, lines 51 – 63).

Regarding claim 94, Liljestrand teaches the incorporation of an optical filter configuration (see, e.g., col. 11, lines 8 – 26).

(10) Response to Argument

Regarding the rejection of independent apparatus claims 66 and 72 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 4 of Liljestrand in view of Ghaed et al., the appellant's arguments filed 8/2/2007 have been fully considered but they are not persuasive. The appellant argues that the double patenting rejection is improper because the Liljestrand specification cannot be used to support the rejection.

With respect to claims 66 and 72 of the instant application and claim 1 of Liljestrand, Liljestrand recites an apparatus for conducting electrochemiluminescence (ECL) measurements, wherein the apparatus is comprising:

- a cell having at least one cell wall which includes a transparent portion adjacent to an ECL chamber defined within said cell;

- a working electrode abutting said ECL chamber and in optical registration with said transparent portion;

- a counter electrode abutting said ECL chamber; and

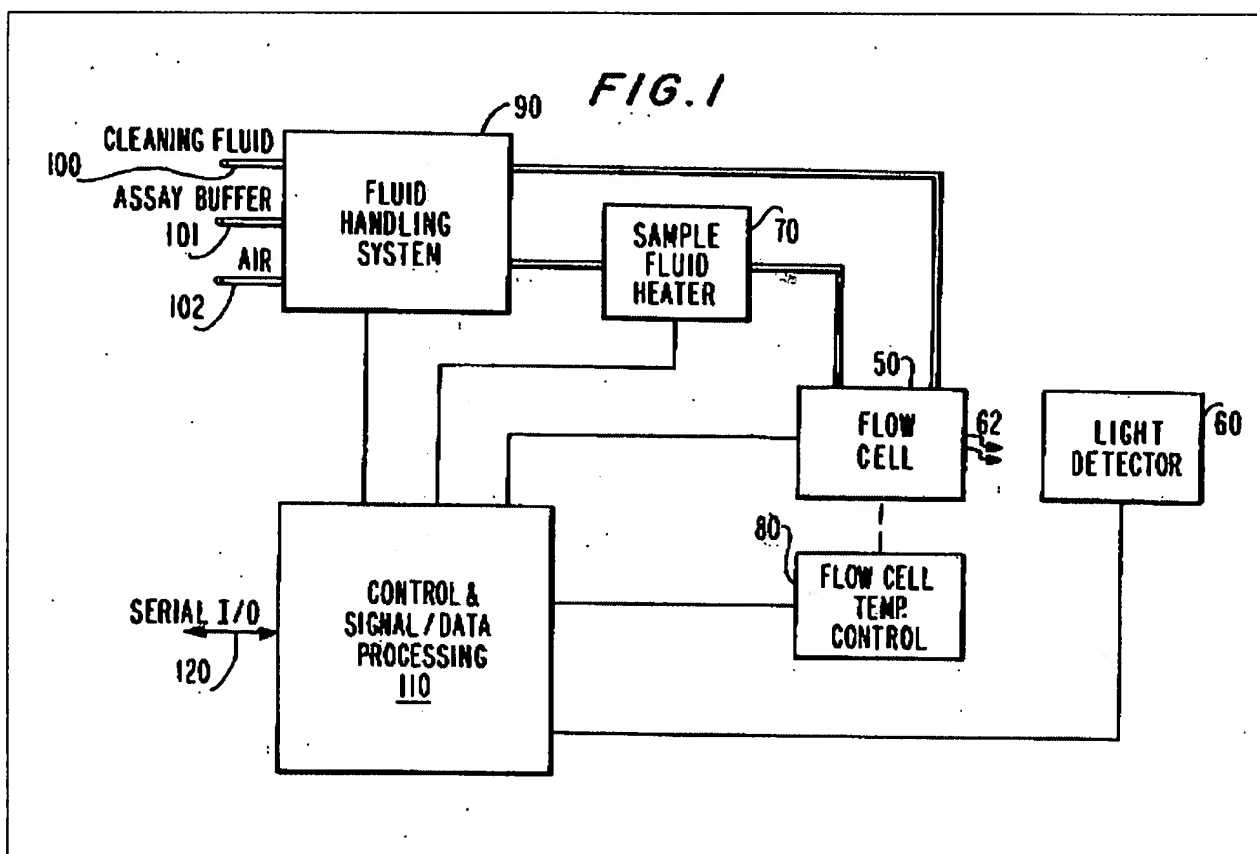
- an electrically-shielded window adjacent to and in optical registration with said transparent portion.

Liljestrand does not specifically recite a heater that is thermally coupled or in thermal contact with the working electrode for adjusting the operating temperature of the working electrode. Liljestrand does not specifically recite a heater that is thermally coupled or in thermal

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contact with at least one surface of the chamber for adjusting the operating temperature of the chamber, and thereby the operating temperature of the working electrode.

Ghaed does teach that the electrochemiluminescence process is substantially sensitive to the temperature of the sample under test (see col. 6, lines 38 – 49). Ghaed does teach the use of a fluid handling system that has a fluid heater system in conjunction with the flow cell (see col. 6, lines 49 – 61). The fluid heater 70, although not in direct contact with the flow cell 62, is considered *thermally coupled* with the flow cell 62, where the electrochemiluminescence process occurs, and fluid handling system 90 (see, e.g., col. 6, line 15 – col. 7, line 31; figure 1).



The recitation in the claim that the heater is *thermally coupled* with the working electrode is given a reasonable broad interpretation meaning that the heater need not be in direct

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physical contact with the working electrode, but only needs to be capable of inducing a temperature change in the environment proximal to the working electrode and the working electrode itself. These claims do not positively recite that the heater is *structurally coupled directly* to the working electrode or ECL chamber. For claim language interpretation purposes, if a heater heats a processing fluid that comes into contact with the working electrode or ECL chamber and then the working electrode or ECL chamber is subsequently heated by the heated fluid, then the prior art teachings are considered to meet this claim limitation. If the prior art structure is capable of performing the intended use, then it meets the claim. This “thermally coupled” recitation simply does not *exclude* what is taught by Ghaed pertaining to the fluid heater and flow cell arrangement. It is well settled that the United States Patent and Trademark Office (PTO) is obligated to give a disputed claim term its broadest reasonable interpretation, taking into account any enlightenment by way of definitions or otherwise found in the specification. See *In re Bigio*, 381 F.3d 1320, 1324, 72 USPQ2d 1209, 1211 (Fed. Cir. 2004) (“[T]he PTO gives a disputed claim term its broadest reasonable interpretation during patent prosecution.”). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993); *In re Barr*, 170 USPQ 330 (CCPA 1971). The applicant cannot read limitations set forth in the description into the claims for the purpose of avoiding the art. See *In re Sporck*, 155 USPQ 687 (CCPA 1967). The claims must be given their broadest reasonable interpretation consistent with the supporting description. See *In re Hyatt*, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). “The PTO applies to the verbiage of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of

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ordinary skill in the art.” See *In re Morris*, 127 F.3d 1048, 1054, 44 USPQ2d 1023, 1027 (Fed. Cir. 1997). “During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.” See *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). “The PTO broadly interprets claims during examination of a patent application since the applicant may ‘amend his claim to obtain protection commensurate with his actual contribution to the art.’”(quoting *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550 (CCPA 1969)). See *In re Yamamoto*, 740 F.2d 1569, 1571, 222 USPQ 934, 936 (Fed. Cir. 1984).

Liljestrand does indicate that the electrochemiluminescence process occurs at the working electrode 140 site when testing assay samples (see, e.g., 14, lines 41 – 64). Therefore, it is obvious that the electrochemiluminescence process occurs at the working electrode 140 site of the Liljestrand device. Since, as discussed above, Ghaed teaches that the electrochemiluminescence process is temperature sensitive, the desirability of incorporating temperature control with a testing device utilizing an electrochemiluminescence process would have been reasonably recognized by a person of ordinary skill in the art. Hence, a person of ordinary skill in the art would have recognized the suitability of using a heating device to control the temperature of the working electrode test site in the claimed Liljestrand device (see MPEP § 2144.07). Furthermore, as evidenced by Ghaed, a person of ordinary skill in the art would accordingly have had a reasonable expectation for success in incorporating the use of a heating element for effectively inducing and controlling the electrochemiluminescence test process (see MPEP § 2143.02). An obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of the case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others

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would not. See *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. ___, 2007 WL 1237837 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”). Therefore, it would have been obvious to a person of ordinary skill in the art to incorporate the use of a heater device associated with either the working electrode or surface of the chamber proximal to the working electrode as claimed to facilitate effecting heating and temperature control for the disclosed device.

As shown above in the double-patenting rejection, the claims of the instant application and the cited patent are compared and differences noted. Furthermore, the specification of the prior patent can indeed be relied upon in a nonstatutory obviousness-type double patenting rejection. The MPEP clearly indicates that in an obviousness-type double patenting rejection, the specification of the patent may be used as prior art in determining if the present application claims an *obvious variation* of an invention claimed in the cited prior patent. “[T]hose portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent[.]” In addition, “this use of the disclosure is not contravention of the cases forbidding its use as prior art, nor is it applying the patent as a reference under 35 U.S.C. 103, since only the disclosure of the invention claimed in the patent may be examined.” (see MPEP § 804, page 800 – 22; Rev. 5, Aug. 2006). The disclosure of Liljestrang of the electrochemiluminescence process occurring at the working electrode site 140 of the device is merely recognizing what process is already occurring at the working electrode site. The reference to the Liljestrang specification in the rejection is merely being used in order to interpret the claim language and to understand how the claimed device operates. Therefore,

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the claimed apparatus of the instant application is clearly an obvious variation of the claimed apparatus of the cited patent. Therefore, this rejection is indeed considered proper and should be maintained.

Regarding claims 68 – 70 and 79 – 84, these claims are considered statements of intended use or how the claimed device is intended to be operated. Since the prior art teaches all of the *positively recited structure* in the claims, the device taught by the prior art is considered to be capable of being used or operated in the same manner as claimed. These claims do not positively recite any further specific structure, such as an internal controller or programmer as argued by the appellant, to perform the stated function that would define over the device structure taught by the prior art. (“Many of appellant’s arguments fail from the outset because, as the solicitor has pointed out, they are not based on limitations appearing in the claims.”). See *In re Self*, 671 F.2d 1344, 1348, 213 USPQ 1, 5 (CCPA 1982).

The appellant provided no substantial arguments in rebuttal to the rejection of claims 71, 73 – 78 and 85 – 94.

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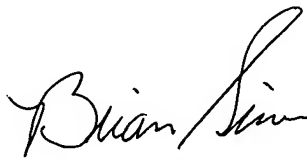
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


Brian J. Sines, Ph.D.




BRIAN SINES
PRIMARY EXAMINER

Conferees:

Brian Sines



Jill Warden



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Appeals Specialist